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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.       |
|---|-------------|----------------------|---------------------------------|------------------------|
| 10/670,636  | 09/24/2003  | Keiko Morii          | MAT-8466US                      | 6835                   |
| 23122   | 7590        | 06/29/2007           |                                 |                        |
| RATNERPRESTIA<br>P O BOX 980<br>VALLEY FORGE, PA 19482-0980 |             |                      | EXAMINER<br>ARMSTRONG, ANGELA A |                        |
|   |             |                      | ART UNIT<br>2626                | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>06/29/2007         | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                     |              |  |
|------------------------------|---------------------|--------------|--|
| <b>Office Action Summary</b> | Application No.     | Applicant(s) |  |
|                              | 10/670,636          | MORII        |  |
|                              | Examiner            | Art Unit     |  |
|                              | Angela A. Armstrong | 2626         |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al (US Patent No. 5,692,097).

Yamada discloses a voice recognition method for recognizing a word in speech, which implements a normalizing similarity vector calculating unit. Regarding claim 1, Yamada discloses a method of speaker normalization comprising: a feature parameter extracting step of segmenting an input speech utterance into a constant time length to have frames and extracting acoustic feature parameter of each of the frames; a frequency converting step of frequency-converting the acoustic feature parameter by using plural frequency conversion coefficients previously defined; a step of using all the combinations of plural post-conversion feature parameters obtained by the frequency conversion and at least one standard phonemic model, to compute plural similarities or distances between the post-conversion feature parameters of each of the frames and the standard phonemic model; a step of deciding a frequency converting condition for normalizing the input utterance by using the plural similarities or distances; and a step of normalizing the input utterance by using the frequency converting condition (col. 18, line 18 continuing to col. 31, line 44).

Regarding claim 2, Yamada discloses a step of deciding a frequency converting condition has a step of mutually comparing between the plural similarities or distances included in an input frame constituted by the frame, a step of selecting for each frame a maximum likelihood, combination of a phoneme and a frequency conversion coefficient by using a result of comparison, and a step of cumulating the frequency of the frequency conversion coefficient in a maximum likelihood over plural frames and deciding a frequency conversion coefficients in highest frequency as a frequency converting condition (col. 18, line 18 continuing to col. 31, line 44).

Regarding claim 3, Yamada discloses a step of deciding a frequency converting condition has a step of mutually comparing between the plural similarities or distances included in an input frame constituted by the frame, a step of selecting a set of a phoneme of the standard phonemic model and a frequency conversion coefficient that provides a result of maximum likelihood, and a step of deciding the selected frequency conversion coefficient as a frequency converting condition of the frame (col. 18, line 18 continuing to col. 31, line 44).

Regarding claim 4, Yamada discloses a step of computing a similarity or distance further includes a step of computing, for each frame, a ratio in similarity or distance of the phoneme as a weight by using the frame-based acoustic feature parameter of the frame and the standard phonemic model, the step of deciding a frequency converting condition being a step to decide the frequency converting condition by using the weight (col. 18, line 18 continuing to col. 31, line 44).

Regarding claim 5, Yamada discloses the step of computing the similarity or distance of the phoneme as a weight includes a step of selecting for each frame a frequency conversion

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coefficient in a maximum likelihood with respect to all the phonemes of the standard phonemic model, a step of deciding a phoneme based frequency converting condition for all the phonemes, on all the phonemes of the standard phonemic model, from a result of cumulating phoneme by phoneme the frequency converting condition in a maximum likelihood over a plural frames, and a step of using the phoneme-based frequency converting condition and the similarity or distance, to decide for each frame a weight for the phoneme-based frequency converting condition, wherein the step of deciding a frequency converting condition decides a frequency converting condition for the frame by using the weight on the phoneme-based frequency converting condition (col. 18, line 18 continuing to col. 31, line 44).

Regarding claim 6, Yamada discloses the step of deciding frequency converting condition employs at least vowels in comparing similarities or distances (col. 18, line 18 continuing to col. 31, line 44).

Regarding claim 7, Yamada discloses the step of deciding frequency converting condition employs only vowels in comparing similarities or distances (col. 18, line 18 continuing to col. 31, line 44).

Regarding claims 8-15, claims 8-15 are apparatus claims similar in scope and content to method claims 1-7, and therefore are rejected under similar rationale.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chuang (US Patent No. 4,941,178)

Goldberg et al. (US Patent No. 5,625,747)

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Yamada et al. (US Patent No. 5,712,956)

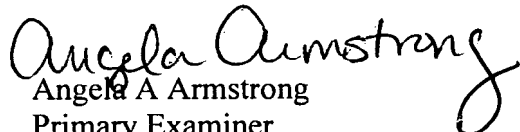
Naito et al. (US Patent No. 6,236,963)

Eide (US Patent No. 6,823,305).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Angela A. Armstrong  
Primary Examiner  
Art Unit 2626

AAA  
June 19, 2007